

SOV/136-59-2-6/24

Some Further Possibilities for the Complex Utilisation of Raw Materials in Non-Ferrous Metallurgy

with most of the rare metals will be removed by acid leaching; rare-metal concentrates and cadmium sponge being precipitated fractionally from the solution after which the zinc is recovered. Lead-production dusts will be treated with concentrated sulphuric acid; the sulphated product will be leached with water, the solutions being treated similarly to the sublimate acid-leaching solution and the lead cake returned for smelting. The author draws attention to the appreciable quantities of lead (1.0 to 2.5%) zinc (8 to 12%) copper, noble and rare metals in current slags from lead smelting and the existence of large slag dumps richer in non-ferrous metals than ores now mined and deplores delays in providing adequate slag-utilisation facilities. By 1965, however, these facilities should be considerable, yielding annually thousands of tonnes of lead, over 100,000 tonnes of zinc, some copper and noble metals at low capital and operating costs. He estimates that slag treatment plant at existing works would pay for itself

Card 2/3

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'Some Further Possibilities for the Complex Utilisation of Raw Materials in Non-Ferrous Metallurgy

in 2 to 3 years (even less if recovery of metals other than lead, zinc and tin is allowed for). It should be possible to produce zinc oxide from slag-treatment solutions (also dust treatment solutions) without the stage of metallic zinc; research on and plant for the processes involved are needed. The author mentions the advantages of hydrometallurgical treatment of dust and estimates that the capital cost of a plant for dealing annually with 9500 tonnes of lead-works dust would be recouped in 5 months.

Card 3/3

KARCHEVSKIY, V. K.

PA 51T72

USSR/Mines

Mar 1948

Explosions, Underground
Mining Methods

"Large-Scale Blasting without Demolishing the Mine,"
V. K. Karchevskiy, N. Ya. Shvets, 12 pp

"Gornyy Zhur" No 3

Describes experiments conducted in Magnitogorsk mine, showing that use of mass blasting is quite possible without destroying whole drift, and includes diagrams indicating methods employed.

LC

51T72

KARCHEVSKIY, V.K.

MAKHIN, P.A., professor, doktor tekhnicheskikh nauk; KARCHEVSKIY, V.K.,
gornyy inzhener.

Efficiency of explosion energy in relation to the angle of
opening of the blast crater. Nauch. trudy NPI 32:19-23 '55.
(MLRA 10:2)

(Blasting)

MAKHIN, P.A.; KARCHEVSKIY, V.K.

New drill bit with expander. Izv. vys. ucheb. zav.; tsvet. met.
5 no.2:17-21 '62. (MIRA 15:3)

1. Novocherkasskiy politekhnicheskii institut, kafedra razrabotki
rudnykh i nerudnykh mestorozhdeniy.
(Rock drills)

BORODIN, Stepan Vasil'yevich; DEMICHEV, Aleksandr Nikolayevich;
ROZIN, Pavel Iosifovich. Prinimali uchastiye:
TOCHIL'NIKOVA, G.M.; KARCHEVSKIY, V.N.; FILIPPOVA, E.,
red.izd-va; LEBEDEV, A., tekhn. red.

[Finance and credit] Finansy i kredit. Moskva, Gosfin-
izdat, 1963. 222 p. (MIRA 17:2)

KARCHEVSKIY, Yur., pol'skiy zhurnalist

Builders of their own happiness. Sov. profsoiuzy 18 no. 11:40-41
Je '62. (MIRA 15:6)

(Poland--Economic conditions)

KARCHIK, V.G., inzh.; SAVITSKIY, Yu.P.

Establishing an efficient flow sheet for the transportation of window glass. Stek. i ker. 23 no.1:16-17 Ja '66.

(MIRA 19:1)

1. Vsesoyuznyy gosudarstvennyy mezhotraslevoy proyektno-konstruktorskiy institut po avtomatizatsii predpriyatiy promyshlennosti stroitel'nykh materialov.

POPOVICH, A.I. (Komsomol'sk-na-Amure); KARCHIK, Ye.G. (Komsomol'sk-na-Amure)

Using a positioner for the welding of flat plate. Avtom. svar.
17 no.8:79-81 Ag '64. (MIRA 17:11)

KARCHIKU, KAKARRIKI

ALBANIA/Microbiology - Medical and Veterinary
Microbiology

F-4

Abs Jour : Referat Zhurn - Biol., No 16, 25 Aug 1957, 68676

Author : Karchiku, Kakarriki

Inst :

Title : Dermatomicosis in Albania.

Orig Pub : Bul. Shkenc. Natur., 1955, No 3, 39-71

Abstract : No abstract.

Card 1/1

- 83 -

KARCHIKYAN, Oganēs Khachaturovich, nauchn. sotr.; BABADZHANYAN,
Mikhail Sēbatovich, nauchn. sotr.; POSOSHNIKOVA,
Klavdiya Porfirovna, nauchn. sotr.; TER-AKOPYAN, E.N.,
otv. red.

[Manpower and its use in the agriculture of the Armenian
S.S.R.] Trudovye resursy i ikh ispol'zovanie v sel'skom
khoziaistve Armianskoi SSR. Erevan, Izd-vo AN Arm.SSR,
1963. 204 p. (Voprosy razvitiia narodnogo khoziaistva
Arm.SSR, no.3) (MIRA 17:10)

1. Institut ekonomiki AN Arm.SSR (for Karchikyan,
Babadzhanyan, Pososhnikova).

KARCHIKYAN, Stepan Ivanovich

[Alcoholic intoxication and the nervous system] Alkogol'nai
intoksikatsiia i nervnaia sistema. Leningrad, Medgiz, 1959.
34 p. (MIRA 13:9)

(ALCOHOLISM)

(NERVOUS SYSTEM)

KARCHIKYAN, S.I., prof. (Leningrad)

Role of the psychogenic factor in the development of hypertension. .
Vrach.delc no.8:16-22 Ag '62. (MIRA 15:11)
(HYPERTENSION) (NEUROSES)

~~KARCHIKYAN, Stepan Ivanovich~~, prof.; SHVAREV, A.I., red.; SAFRONOVA,
I.M., tekhn. red.

[Traumatic lesions of peripheral nerves; diagnosis and
fundamental principles of treatment] Travmaticheskie po-
razheniia perifericheskikh nervov; raspoznavanie i osno-
vnye printsipy lecheniia. Leningrad, Medgiz, 1962. 215 p.

(MIRA 16:8)

(NERVES, PERIPHERAL—WOUNDS AND INJURIES)

KARCHINOV, K.

Results of myoplasty in recurrent and habitual dislocations of the shoulder joint. Khirurgia, Sofia 8 no.10:927-935 1955.

(SHOULDER, dislocations,

habitual & recur., myoplasty (Bul))

(DISLOCATIONS,

shoulder, habitual & recur., myoplasty (Bul))

KARCHINOV, K.

Grutsa's flexor transposition of the levator of the hip in
spastic paralysis with flexion of the knee. Khirurgia, Sofia
9 no.5:404-408 1956.

1. Institut za protezirane, vizstanovitelna khirurgia i
trudoustroistvo Direktor: Ia. Kholevich.

(KNEE, diseases,
contracture in spastic paralysis, surg. (Bul))
(CONTRACTURE,
knee in spastic paralysis, surg. (Bul))
(PARALYSIS,
spastic with knee contracture, surg. (Bul))

KARCHINOV, K.

Congenital hip dislocation in tropical countries. Khirurgia, Sofia
11 no.1:92-93 1958.

(HIP, disloc..

congen., in tropics (Bul))

(MEDICINE, TROPICAL,

congen. hip disloc, in tropics (Bul))

KARCHINOV, K.

Popular method for preventing of congenital dislocation of the hip in Vietnam. Ortop. travm. protez., Moskva 19 no.6:78-79 N-D '58.

(MIRA 12:1)

1. Iz Instituta vosstanovitel'noy khirurgii protezirovaniya i trudous-troystva (dir.- kand. med. nauk Ya. Kholevich), Sofiya.

(HIP, disloc,

congen. prev. (Rus))

KARCHINOV, K.

Segmental osteotomy with rotation of a segment. Khirurgiia, Sofia
12 no.7:644-647 '59.
(EXTREMITIES surg.)

KARCHINOV, K.

On certain congenital anomalies of the hand. Khirurgia, Sofia
13 no.2-3:255-257 ' 60.

1. Iz Instituta za protezirane, vuzstanovitelna khirurgia i
trudoustroistvo.

(HAND abnorm.)

KARCHINOV, K.

Spongy osteoma of the head of the femur and humerus. Khirurgiia, Sofia 14 no.2/3:317-319 '61.

1. Institut za vustanovitelna khirurgiia, protezirane i trudoustroistvo.

(OSTEOMA case reports) (FEMUR HEAD neopl)
(HUMERUS neopl)

KARCHINOV, K.

A case of cholesteatoma of the tibia. Khirurgiia, Sofia 14 no.2/3:
325 '61.

(CHOLESTEATOMA case reports) (TIBIA neopl)

/'

KARCHINOV, K.

On the problem of the treatment of congenital short tibia. Khirurgiia (Sofia) 14 no.11:1045-1051 '61.

1. Institut za vuzstanovitelna khirurgiia, protezirane i rekhabilitatsiia. Direktor: dots. IA. Kholevich.

(TIBIA abnorm)

KARCHINOV, K.

A case of bipolar articular tuberculous osteitis. Khirurgiia
15 no.2/3:318-319 '62.

1. Iz Institut za vuzstanovitelna khirurgiia, protezirane i
trudoustroistvo.

(TUBERCULOSIS OSTEOARTICULAR case reports)
(FOOT dis)

KARCHINOV, K.

On the treatment of sequelae of leg burns. Khirurgiia 15
no.9/10:813-816 '62.

1. Iz Nauchno-izsledovatel'skiiia institut po vuzstanovitel'na
khirurgiia, protezirane i rekhabilitatsiia.
(BURNS) (FOOT DISEASES)

KARCHINOV, K.

Congenital agenesis of the fibula. Khirurgiia 15 no.9/10:
967-968 '62.

1. Iz Nauchno-issledovatel'skiiia institut po vuzstanovitel'na
khirurgiia, protezirane i trudoustroistvo.
(FIBULA)

KARCHINOV, K.

A case of bipolar articular localization of tuberculous osteitis.
Khirurgia (Sofia) 16 no.2:202-203 '63.

(TUBERCULOSIS OSTEOARTICULAR) (METATARSUS)
(FOOT DISEASES)

KARCHINOV, K.

Statistical data on congenital anomalies of the locomotor system. Khirurgiia (Sofiia) 16 no.7:633-635 '63.

1. Institut za vuzstanovitelna khirurgiia, protezirane i rekhabilitatsiia Direktor: dots. IA. Kholovich.

(ABNORMALITIES) (STATISTICS)

(HAND DEFORMITIES) (LEG)

KARCHINOV, K.

A case of bone necrosis of the forearm in radiation therapy.
Khirurgiia (Sofia) 16 no.9:880-881 '63.

1. Iz Instituta po vustanovitelna khirurgiia, protezirane i
rekhabilitatsiia, Sofia.

*

KARCHINOV, K., starshiy nauchnyy sotrudnik

Congenital absence of the fibula. Vest. khir. 91 no.8:98-103
Ag'63 (MIRA 17:3)

1. Iz Instituta vosstanovitel'noy khirurgii, protezirovaniya
i trudoustroystva (direktor - dotsent Ya. Kholevich), Sofiya.

L 8831-66 EMT(1)/EWA(3)/EWA(h)-2 JK

ACC NR: AT5027532

SOURCE CODE: UR/0000/63/000/000/0099/0112 37

AUTHOR: Karchkhadze, R. G. 44.5 B+1

ORG: Tbilisi Institute of Vaccines and Serums (Tbilisskiy institut vaktsin i syvorotok)

TITLE: The problem of improving the purification and concentration process of antitoxic serums 44.5

SOURCE: Moscow. Nauchno-issledovatel'skiy institut vaktsin i syvorotok. 44.5
Vaktsiny i syvorotki; materialy po proizvodstvu, no. 1, 1963, 99-112

TOPIC TAGS: blood plasma, serum, chemical purity, solution concentration, microorganism contamination, antibody 44.5

ABSTRACT: In the Soviet Union the Diaform-3 (IEM AMN SSSR) method for purifying and concentrating antitoxic serums and plasma is generally used. This method has proven quite satisfactory in most respects, but the frequent presence of pyrogens of a bacterial origin, especially during summer production, prompted an overall analysis of operating conditions and equipment and the development of improvements. In analyzing the bacterial levels of the serums at different stages of processing, it was found that the processes conducted under exposed conditions are largely responsible for the increased bacterial levels.

Card 1/2

L 0031-66

ACC NR: AT5027532

Improvements in equipment and processing procedures are described in detail. The bacterial levels of purified and concentrated serums as well as their pyrogenicity have been significantly reduced by protecting the serums from exposure with new or modified equipment, by using sterile pepsin and sterile ammonium sulfate, and by lowering of temperature during certain stages of processing. Orig. art. has: 2 tables and 8 figures.

SUB CODE: 06, 07/ SUBM DATE: 31Aug63/ ORIG REF: 000/ OTH REF: 000

BVR
Card 2/2

SIRBILADZE, N.Ya.; RALISHVILI, L.T.; DROZDOVA, Ye.; MYL'NIKOVA, T.A.; KARCHKHADZE, R.G.

Production of pyrogen-free antidiphtheria and antitetanus therapeutic sera. Nauch. osn. proizv. bakt. prep. 10:196-205 '61. (MIRA 18:7)

1. Tbilisskiy institut vaktsin i syvorotok.

117 AND 2ND GROUPS

CA **KARCHKOVA**, *PROCESSES AND METHODS*

Microtest for manganese. I. M. Korenman and L. N. Karchkova. (Gor'ky State Univ.). *J. Applied Chem. (U.S.S.R.)* 19, 903(1946) (in Russian).—A convenient test for Mn consists in electrolyzing in very dil. H₂SO₄ and looking for the MnO₂ color at the anode. As little as 15 γ per ml. can be detected. G. M. Kosolapov

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

1930-1945

1946-1950

1951-1955

1956-1960

1961-1965

1966-1970

1971-1975

1976-1980

1981-1985

1986-1990

1991-1995

1996-2000

2001-2005

2006-2010

2011-2015

2016-2020

2021-2025

2026-2030

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2086-2090

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2096-2100

2101-2105

2106-2110

2111-2115

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2156-2160

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2166-2170

2171-2175

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2181-2185

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2201-2205

2206-2210

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2216-2220

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2236-2240

2241-2245

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2271-2275

2276-2280

2281-2285

2286-2290

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2951-2955

2956-2960

2961-2965

2966-2970

2971-2975

2976-2980

2981-2985

2986-2990

2991-2995

2996-3000

KARCHMAR, Ts. A

USSR/ Analytical Chemistry. Analysis of Inorganic Substances.

G-2

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27142

Author : V.L. Indenbom, Ts.A. Karchmar, L.F. Yurkov, B.M. Glukhovskoy.

Title : Fast Method of Determination of Potassium Oxide in Glass by Radioactivity.

Orig Pub: Zavod. laboratotiya, 1956, 22, No. 11, 1293.

Abstract: The determination of potassium oxide in glass was carried out using the β radiation of the natural radioactive isotope K^{40} . The activity was measured with an installation of the type B with a AS-2 counter. In order to eliminate adjustments for self-absorption, the thickness of the specimen surrounding the counter must be ≥ 0.4 g/cm². The error of the determination of K_2O in glass

Card 1/2

USSR/ Analytical Chemistry. Analysis of Inorganic
Substances.

G-2

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27142.

is from 0.1 to 0.15%. If the content of K_2O was known, the digression of the expansion ratio of glass from the given ratio allows for the determination also of the content of Na_2O . The complete determination is carried out in about 1 hour.

Card 2/2

SHELYUBSKIY, V.I.; KARCHMAR, TS.A.

Determining homogeneity of the batch by its natural radioactivity.
Stek. i ker. 15 no.4:16-18 Ap '58. (MIRA 11:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut elektro-
vakuumnogo stekla.

(Glass manufacture--Quality control)
(Radioactivity--Measurement)

SHELYUBSKIY, V.I.; KARCHMAR, TS.A.

Improved method of controlling batch homogeneity. Steklo ker.
18 no.9:16-20 S 161. (MIRA 14:10)
(Glass manufacture)

USHAKOV, S.N.; KLIMOVA, O.M.; KARCHMARCHIK, O.S.; SMUL'SKAYA, E.M.

Synthesis of blood substitute polymers exhibiting the properties
of inhibitors-antioxidants. Dokl. AN SSSR 143 no.1:231-
234 Mr '62. (MIRA 15:2)

1. Chlen-korrespondent AN SSSR (for Ushakov).
(BLOOD PLASMA SUBSTITUTES)
(VINYL COMPOUND POLYMERS)
(CANCER RESEARCH)

KARCHMAZH, S. A.

"On the effect of general vertical vibration on the conditioned reflex activity and gas metabolism in animals."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

KARCHMAZH, S.I.

Effect of general vertical vibrations on the level of oxygen
requirement in rats. Gig.i san. 26 no.1:168-174 Ja '61.

(MIRA 14:6)

(VIBRATION--PHYSIOLOGICAL EFFECT) (RESPIRATION)

KARCOL, Jaroslav

To strengthen the leading role of the Party. Sbor VSChT
Pardubice no.1:5-11 '63.

1. Chair of Marxism-Leninism, Higher School of Chemical
Technology, Pardubice.

KARCOLOVA, Anna

Position of the working class in the Czechoslovak Factory
of Explosives in Semtin near Pardubice. Sbor VSOCH Pardubice
Pt.2:5-16 '63.

1. Chair of Marxism-Leninism, Higher School of Chemical
Technology, Pardubice.

KARCSAY, Ilona

HUNGARY

BIRO, Istvan, Dr. VARDAY, Jozsef, Dr. BIRO, Istvanne (Mrs), SZEKELY, Lajos, Dr. KARCSAY, Ilona, Dr; technical coworker: KOVACS, Ervinne (Mrs); Graduate Medical Institute, III. and IV. Internal Medicine Department (Orvostovábbképző Intézet III. és IV. Belgyógyászati Tanszék); Medical University of Budapest, II Medical Clinic, Laboratory (Budapesti Orvostudományi Egyetem, II. Belgyógyászati Klinika, Laboratorium); VII, district Council Petöfy Sándor street and XIV. district Council Majus 1 avo Specialist Ambulant Service, Laboratory, Budapest (Budapesti VII. ker. Tanács Petöfy Sándor utcai és XIV. ker. Tanács Majus 1 uti Szakorvosi Rendelőintézet, Laboratorium)

"The Occurrence of Cryoglobulinemia Based on 9454 Examinations."

Budapest, Orvosi Hetilap, Vol 104, No 5, 3 Feb 63, pages 205-207.

Abstract: [Authors' summary modified] Serum was tested for cryoglobulinemia in 7954 diseased patients and 20 showed positive tests. Of 1500 healthy control subjects none showed positive results. Cryoglobulinemia occurs mainly in hematological diseases (5.48 per cent) although it is not extremely rare in mixed medical cases. Its use is recommended in screening tests to detect early stages of disease. [19 Western 6 Hungarian references]

1/1

K. G. G. G. G.

... production of loud-speakers, ...

... (Hirodastech film ...)
Vol. 1, no. 5, Oct. 1959.

... of East European Accession (1961) 10, Vol. 1, no. 1, Jan. 1960

Uncl.

KARCSAY, Rezső

Development of loudspeaker magnetic circuits with the view of mass production. Finommechanika 2 no. 11:337-342 N '63.

1. Orion Radio and Electricity Enterprise, Budapest.

KARCSAY, Rezso

Technical and economic comparative analysis of dynamic loudspeakers with elliptic and circular membrane. Pt. 2. Kep hang 9 no. 5: 146-150 0 '63.

1. Orion Radio es Villamossagi Vallalat.

KARCSAY, Rezso

Technical and economic comparative investigation of elliptic
dynamic loudspeakers with circular membrane. Kep hang 9 no.4:
114-119 Ag '63.

1. Orion Radio es Villamossagi Vallalat.

POLAND/ Radio Physica. General

J-1

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 4056

Author : Karcskiewicz E.
Inst : The University, Poznan , Poland
Title : The Equations of Acoustics in the Form of Euler and of Lagrange.

Orig Pub : Bull. Soc. amis sci. et lettres Poznan, 1956-1957
(1958), Bl4, 61-71

Abstract : As is known, the hydrodynamic and acoustic phenomena can be described in Euler or Lagrange variables. The articles gives the fundamental equations of hydrodynamics in the Euler and Lagrange variables and analyzes the freatures of each approach. It is noted that the eqution of motion and the Lagrange variables is particularly suitable for the one-dimensional case, since it makes it possible to get rid of the nonlinearity. In this case one obtains an equation that is similar to the wave equation, the nonlinearity of which is due exclusively to the equation of state. A method for

Card : 1/2

KARCZ, Aleksander, mgr inz.; MAZANEK, Eugeniusz, dr inz.

Studies on the reactivity of coke. Huta Lenina Prace no.12:3-13
'62.

KARCZ, J.

EXCERPTA MEDICA Sec.5 Vol.10/5 Gen.Pathology May57

1530. KARCZ J. Odd. Chir. Dziecięcej A.M., Gdansk. *Rzadki przypadek wrodzonego maziówczaka złośliwego u 8-miesięcznego dziecka. Congenital malignant synovioma in an infant 8 months of age PEDIAT. POL. 1956, 31/7 (815-817)

The orange-sized tumour was localized on the buttock. Roentgenographic examination revealed no lesions of the bones or lungs. Radical removal was impossible; 13 days after operation the inguinal lymph nodes became enlarged. The neoplasm could have arisen from synovial spaces in any part of the pelvis. Histological study showed a malignant synovioma.

Karlinska - Warsaw (V, 16)

SZTABA, Romuald; KARCZ, Jerzy

"Water intoxication" in Hirschsprung's disease. Pol. tyg.lek.
18 no.49:1855-1856 2 D'63.

1. Z Kliniki Chirurgii Dziecięcej AM w Gdansk; kierownik:
dr.med. Romuald Sztaba.

*

KARCZ, Jerzy (Gdansk-Oliwa, ul. Arkonska 36)

Favorable outcome of actinomycosis of the lungs, pleura & wall of thorax. *Pediat. polska* 33 no.2:189-193 Feb 58.

1. Z Oddziału Chirurgii Dziec. II Kliniki Chorob Dziec. A.M. w Gdansku Kierownik Oddziału: zast. prof. dr med. R. Sztaba.

(ACTINOMYCOSIS, in inf. & child

lungs, pleura & wall of thorax (Pol))

(LUNG DISEASES, in inf. & child

actinomycosis, with infect. in pleura & wall of thorax (Pol))

(PLEURA, dis.

actinomycosis in child, with infect. in lungs & wall of thorax (pol))

(THORAX, dis.

actinomycosis of wall of thorax in child, with infect in lungs & pleura (Pol))

KARCZ, Jerzy

Congenital fissure of the abdominal cavity in newborn infants
(gastroschisis). Polski przezl.chir.32 no.2:181-184 P '60.

1. Z Oddzialu Chirurgii Dzieciecej A.M. w Gdansk. Kierownik
Oddzialu: zastepca prof.dr. R. Sztaba.
(ABDOMEN abnorm.)

SZTABA, ~~Romuald~~; KARCZ, Jerzy

Late complications after closed injuries of the kidney in children.
Polski przegl. chir. 33 no.11a:1440-1443 '61.

1. Z Kliniki Chirurgii Dziecięcej AM w Gdańsku Kierownik: zast.
prof. dr R.Sztaba.

(KIDNEYS wds & inj)

KARCZ, Jerzy

Suppurative inflammation of the adipose perirenal capsule in children
(perinephritis). Pediat Pol 37 no.2:145-150 F '62.

1. Z Kliniki Chirurgii Dziecięcej AM w Gdansk Kierownik Kliniki :
zastępcą prof. dr med. R. Sztaba.

(PERINEPHRITIS in inf & child)

KARZ, M.

1
4
1- 92 (NB)

✓ Nitration products of ethyl phenoxycetate and 2-methyl-phenoxycetate. Zygmunt Eckstein and Mieczysław Karz (Politechnika, Warsaw). *Roczniki Chem.* 33, 1465-71 (1959) (English summary).—Et phenoxycetate (I) (27 g.) was slowly added (with stirring) to 75 ml. concd. H_2SO_4 at -10° , and then a mixt. of 12.5 ml. HNO_3 (d. 1.51) and 12.5 ml. H_2SO_4 was added dropwise. The product was slowly poured into a H_2O -ice mixt., filtered, and washed with ag. $NaHCO_3$. Crystn. from EtOH gave 68% 2,4-dinitro deriv. of I (II), m. $76.5-8.0^\circ$. Hydrolysis of II with a KOH soln. gave 2,4-dinitrophenol. 2-Me deriv. of I was nitrated to the 4,6-dinitro-2-methyl deriv. of I (III) m. $81-2^\circ$ (62%) in the same way. 2-Methylphenoxycetic acid (IV) (28 g.) was nitrated with HNO_3 (d. 1.51) to the 4,6-dinitro deriv., m. $170-180^\circ$, (71%). Its Et ester did not cause any depression of m.p. when added to III. A. Kreglewski

ment
Katedra Technologii Organicznej II Politechniki, Warszawa.

KARCZ, S.; POBUDKOWSKI, A.; TRACZYK, W.

Effect of irritation of the hypothalamus on digestive reflexes in rabbits.
Acta physiol. polon. 8 no.3:369-371 1957.

1. Z Pracowni Fizjologii Kierownik naukowy: prof. dr F. Gzubalski
Zakladu Patomorfologii PAN Dyrektor: prof. dr L. Paszkiewicz.

(GASTROINTESTINAL TRACT, physiology,
eff. of hypothalamic stimulation on digestive reflexes
in rabbits (Pol))

(HYPOTHALAMUS, physiology,
eff. of stimulation on digestive reflexes in rabbits (Pol))

L 09211-67
ACC NR: AP7002755 SOURCE CODE: PO/0046/66/011/005/0359/0367
AUTHOR: Chwaszczewska, Janina--Khvashchevska, Ya.; Freindl, Ludwik--Frendl', L.; 20
Karcz, Waldemar--Karch, V.; Przyborski, Wincenty--Priborski, V.; Slapa, Mieczyslaw
ORG: [Chwaszczewska; Przyborski] Institute of Nuclear Research, Swierk; [Freindl]
Institute of Nuclear Physics, Krakow; [Karcz] Institute of Physics, Jagellonian
University, Krakow; [Slapa] Central Laboratory for Radiological Protection, Warsaw
TITLE: Semiconductor system for charged particles identification
SOURCE: Nukleonika, v. 11, no. 5, 1966, 359-367
TOPIC TAGS: particle counter, radiation counter
ABSTRACT: A system consisting of two semiconductor counters of types dE/dx and E
was built to separate particles from nuclear reactions. The properties of this
system were checked by detection of products of reactions induced by 24.8 Mev alpha
particles and 12.4 Mev deuterons on Au, C, and Ca nuclei. The authors thank
Professor H. Niewodniczanski and Professor B. Buras for their interest in this
work. The authors also thank Doctor K. Grotowski, Doctor A. Strzalkowski and
Doctor A. Budzanowski for their advice and encouragement throughout the progress
of this work. They give special thanks to Cyclotron Operation Staff for running
the machine. Orig. art. has: 13 figures. [Orig. art. in Eng.] [NA]
SUB CODE: 18 / SUBM DATE: 09Dec65 / ORIG REF: 003 / OTH REF: 004
Card 1/1 *me* 0925 1629

Country : HUNGARY
Category : Organic Chemistry. Synthetic Organic Chemistry
Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15363
Author : Kovacs, J.; Karczag, A.
Institut. : Hungarian AS
Title : On the Trans-Trans-Spatial Structure of Products of the Dimerization of Certain Simple Propenylphenol Ethers
Orig Pub. : Acta chim. Acad. scient. hung., 1958, 16, No 2, 141-147
Abstract : During debenzoylation of 5,6,3',4'-tetrabenzyl-oxy-2-methyl-3-ethyl-1-phenylenedane (I), the corresponding tetraoxy derivative is formed, during the methylation of which dimethyl ether of α -diisoeugenol (II) is obtained. This demonstrates the trans-trans-structure of I, in contrast to an earlier stated proposal (Kovacs, J., J. Organ. Chem., 1950, 15, 15). Analogously, the trans-trans-structure of the dimers of isochavibetol (III monomer), of benzyl ether

Card: 1/6

G - 32

Country	:		G
Category	:		
Abs. Jour	:	Ref Zhur - Khim., No 5, 1959,	No. 15363
Author	:		
Institut.	:		
Title	:		
Orig Pub.	:		
Abstract cont'd.	:	<p>a CO₂ current and methylated with (CH₃)₂SO₄ in an N₂ current; 1.5 g. of II were obtained, m.p. 106° (from alcohol). 40 g. of a mixture of 4-oxy-3-methoxy- and 3-oxy-4-methoxy-propenyl-benzene are methylated with (CH₃)₂SO₄, and 34.5 g. of product is obtained, which is heated for 30 minutes in 70 ml. of alcohol in the presence of two drops of H₂SO₄, evaporated in a vacuum, C₆H₆ is extracted, the evaporation is repeated and, by freezing, 3.5 g. of III is</p>	
Card:	:	3/6	

Country :
 Category :
 Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15363
 Author :
 Institut. :
 Title :
 Orig. Pub. :
 Abstract cont'd. : separated, m.p. 96° (from alcohol). 1 g. of III in 50 ml. of a 22% solution of HCl in CH₃OH is left for two hours at 18-20°, heated for five hours in a water bath, III is distilled off with vapor and from the residue the dimer of III is extracted with ethyl acetate, yield 0.5 g., m.p. 156-157° (from alcohol). The methylation of the dimer of III leads to II. 2 g. of benzyl ether of III (VII) in 20 ml. of a 1% solution of I₂ in toluene are heated in a water

Card:
 4/6

G - 33

RDP86-00513R00072

Country :
Category :

G

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15363

Author :
Institut. :
Title :

Orig Pub. :

Abstract : bath for five hours, and after 24 hours 1 g.
cont'd. of the dimer of VII is separated out, m.p.
116-118° (from alcohol-ethyl acetate), from
which, as from I, II is obtained. During hy-
drogenation of 0.5 g. of IV, 0.2 g. of α -di-
isoeugenol is obtained, m.p. 180°. V, m.p. 80-
81°, is obtained analogously to the dimer of
VII. V is quantitatively debenzylated and the
product obtained in this way (VIII), after me-
thylation with CH_2N_2 , gives 5,3'-dimethoxy-6,

Card: 5/6

KARCZAG, Laszlo

Looking at the map of the Rumanian State Railways. Magy vasut 6
no.24:2 15 D '62.

KARCZAG, Laszlo

On the significance of the Polish furniture industry. Faipar 12
no.3:94 Mr '62.

KARCZAG-WILHELMS, A.

The trans-trans configuration of the dimerization products of certain propenyl phenyl ethers. / József Karczag and Adrienne Karczag-Wilhelms (L. Eötvös Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 16, 141-7 (1958) (in German).
 Disochavibetol di-Me ether (I) was prepd. from safrole by cleavage with NaOH to form 4-hydroxy-3-methoxy- and 3-hydroxy-4-methoxypropenylbenzene, which were treated with MeSO₃H, then alc. and H₂SO₄ to form isochavibetol (II), which was then dimerized in MeOH-HCl to form disochavibetol, which was methylated with Me₂SO. I proved identical with α-disocugenol di-Me ether prepd. from 3',4',5,6-tetrabenzyl-2-methyl-3-ethyl-1-phenylindan (III) by hydrogenation with Pd-C followed by methylation with Me₂SO. II (6.3 g.) was dissolved in 20 ml. abs. MeOH and treated with 6 g. PhCH₂Cl and 5.7 g. K₂CO₃ to give 6.5 g. isochavibetol benzyl ether (IV), m. 89-90°. IV, when treated with PhMe contg. 1% iodine, gave disochavibetol dibenzyl ether, m. 116-18° (alc.-EtOAc), which was quantitatively debenzylated with 10% Pd-C and methylated with Me₂SO-50% NaOH to I. Disocugenol dibenzyl ether was quantitatively debenzylated by the same method. 4-Ethoxy-3-benzylpropenylbenzene was dimerized to 3',5-dibenzyl-4',6-diethoxy-3-methyl-3-ethyl-1-phenylindan (V), m. 80-1°. V was debenzylated and treated with MeCHN₃ to give disocugenol di-Et ether. From V was also prepd. the tetra-Et ether which proved identical with the compd. known to have a trans-trans configuration. Thus the dimerization (which proceeded in a trans-trans manner) resulted in compds. all contg. the α-configuration. The compd. obtained by Baker, *et al.* (C.A. 48, 8941f), from III by debenzylation and acetylation was shown to be a monomethoxytribenzyl ether deriv.

Distr: 4E20(j)

BRUCKNER, Viktor (Gyozo), prof. (Budapest); KARCZAG (Wilhelms), Adrienne
(Budapest); KORMENDY, Karoly (Budapest); MESZAROS, Miodir (Budapest);
TOMASZ, Jeno (Budapest)

A simple and productive synthesis of pentacene. Acta chimica Hung 22
no.4:443-448 '60. (EEAI 10:2)

1. Institute of Organic Chemistry, Lorand Eotvos University, Budapest.
(Pentacene)

KARCZEWSKA, B.

POLAND/Chemical Technology. Chemical Products and Their
Application. Part 4. - Varnishes, Paints, Paint
Coatings.

H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72525.

Author : Michal Smialowski, Barbara Karczevska.

Inst :

Title : Effect of Caprylic Acid Addition on Protection
Properties of Chlororubber Varnish Coating on
Steel Exposed to Action of Ammonium Nitrate.

Orig Pub: Chem. stosow., 1957, 1, No 1, 13-20.

Abstract: An addition of caprylic acid (I) to varnish on
chlororubber (CR) base improves the anticorro-
sion properties of coatings considerably: samples
of very much stressed steel wire coated with a
thin film of CR with I added to it in the amount

Katedra Materialoznawstwa Chem Politech Warszawskiej, Warszawa

Card : 1/2

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POLAND/Chemical Technology. Chemical Products and Their
Application, Part 4. - Varnishes, Paints, Paint
Coatings.

II

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72525.

of 4.1 to 5.5 g per 1 liter of the varnish with-
stood the action of NH_4NO_3 fog much longer (by 13
to 100%) than control samples (coating of CR without
I). It seems that the improvement of the varnish
properties caused by the introduction of I into
its composition is due to the chemisorption of I on
the metal surface.

Card : 2/2

KARCZEWSKA, H.

Polish Technical Abst.

No. 1: 1954

Chemistry and Chemical Technology

663.14:638.087:664.12
Karczevska H., Rutkowski W. Production of Yeast on Potato Pulp.
„Produkcja drożdży na wycierce ziemniaczanej” (Prace Gl. Inst.
Przem. Roln. i Spół. No. 1), Warszawa, 1952, PWT, 14.5 pp., 2 figs., 15 tabs.
Hydrolysis of potato pulp with sulphuric acid, under pressure and
without pressure, was studied by the authors. The following parameters
for potato pulp hydrolysis were determined: 1) the optimum water
content in the pulp (hydromodulus); 2) the lowest consumption of sul-
phuric acid; 3) the shortest time of hydrolysis. Studies were carried out
on the production of yeast on the non filtered products of hydrolysis, by
utilising the cellulose of fodder albumin and on filtered products of
hydrolysis. A method is given of obtaining fodder and bakery yeast
on the filtered products of hydrolysis. Hydrolysis in open vessels re-
quires dilution of the potato pulp to about 7% of the dry mass content.
The time of hydrolysis, at a temperature of about 100°C with 2%
sulphuric acid, is about 4—4.5 hours; with 1.5% sulphuric acid, about
6—7 hours; and with 1% sulphuric acid, about 9 hours. Saccharization
during this period amounts to about 90%. With autoclave hydrolysis,
the dry mass content can reach 10—11%. At a pressure of 2.5 atm,
a temperature of about 140°C and with 0.4—0.5% acid, the time of
hydrolysis is about 1.5 hours, saccharization about 90%; that is to say
that 100 kg of starch will, after hydrolysis give about 100 kg of re-
ducing agents, determined as glucose. The available capacity of the
converter reaches 75% of the total capacity. Pressing of the products
of hydrolysis on the filter presses gives a clear filtrate. About 16—18%
of the reducing substances of the hydrolysing products remain in the re-
sidue, a loss which could, however, be decreased to about 5% by wash-
ing the residue in the press with hot water. After hydrolysis and pres-
sing, about 95 kg of reducing substances are obtained from 100 kg of

starch. The residue with a dry mass content of 20% amounts to about 33% of the potato pulp used for hydrolysis with the same moisture content. Fermentation occurs just as well on the filtered hydrolysis products as on the unfiltered ones. In order to obtain a higher yield the yeast must become accustomed to the medium. In Torula yeast, the yield of the dry mass of yeast sometimes varies from 25% to 80% in relation to the amount of reducing substances added (the average yield of Nlehcice yeast amounts to about 59% for a 6 months period). Dried bakery and fodder yeast produced on potato pulp hydrolysis products conform with the customary standards. Addition of fruit water from the production of starch effected a marked increase in yields of yeast during February and March, but later tests did not prove this result.

KARCZEWSKA, H.

"Studies Concerning Purification of Sewage from Establishments of the Agricultural and Food Industries." p.366
(PRZEMYSŁ ROLNY I SPOŻYWCZY Vol. 6, no. 9, Sept. 1952 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

KARCZEWSKA, H.

"Hybridization of Yeast," p.37
(PRZEMYSŁ ROLNY I SPOŻYWCZY Vol. 8, no. 1, Jan. 1954 Warszawa, Poland)

SO: Monthly List of East European Accessions, IC, Vol. 3, no. 5, May 1954/Uncl.

KARCZEWSKA, H.
Poland/Chemical Technology - Chemical Products and Their Application. Wood Chemistry
Products. Cellulose and Its Manufacture. Paper, I-23

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63361

Author: Karczewska, H.

Institution: None

Title: Production of Yeast from Sulfite Liquor Wash

Original

Periodical: Zdrozdowywanie wywaru posulfitowego, Przem. rolny i spozywczy, 1954,
8, No 7, 255-256; Polish

Abstract: For the production of yeast from sulfite liquor and sulfite wash 7
strains of yeast cultures were isolated of which 2 T22a and 1ld were
found to be best in accumulation of yeast cells. Under laboratory
conditions one l of sulfite wash, having a density 11.7° Balling,
yielded 6.7-9.9 g yeast, and one l of sulfite liquor of 15° density,
yielded from 13.6 to 14.7 g yeast. Experiments were carried out on
increasing the yield of yeast from sulfite liquor wash by clarifica-
tion and filtration of the wash. Use of decantation in lieu of

Card 1/2

Poland/Chemical Technology - Chemical Products and Their Application. Wood Chemistry
Products. Cellulose and Its Manufacture. Paper, I-23

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63361

Abstract: filtration gives less satisfactory results. The work was conducted
with 3 yeast cultures T22a, N-5-C and Candida tropicalis. Composi-
tion of the wash is given.

Card 2/2

CZYZYK, Artur; KARCZEWSKA, Halina

Studies on serum cholinesterase and on procaine esterase in hyperthyroidism. Polskie arch. med. wewn. 24 no.5:745-752 1954.

1, Z III Kliniki Chorob Wewnętrznych Akademii Medycznej w Warszawie.
Kierownik: prof. dr med. J. Węgliński.

(HYPERTHYROIDISM, metabolism in,
procainesterase & serum cholinesterase)
(ESTERASES,
procainesterase metab. in hyperthyroidism)
(CHOLINESTERASE,
in blood in hyperthyroidism)
(BLOOD,
cholinesterase in hyperthyroidism)

KARCZEWSKA, H.

✓ Utilization of industrial wastes for production of yeast.
Helena Karczevska. *Polska Akad. Nauk, Zeszyty Problem.
Nauki Polskiej* 2, 67-67(1956). --Yeast purifies industrial
waste waters at the same time producing valuable protein
and fat. Russian and Polish methods of yeast propagation
in industrial waters are reviewed, and attention is called to
the possible antibiotic activity of yeast. A.S.S.

KARCZEWSKA, H.

POLAND / Chemical Technology. Chemical Products and Their Appli- I-29
cation. Fermentation Industry.

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, No 10217

Author : Karczewska, H.

Inst : Not given

Title : The Utilization of the Waste Waters from Starch Factories
in the Production of Yeast.

Orig Pub : Przem. spozywczy, 1955, Vol 9, No 9, 280-282

Abstract : Experimental work on the utilization of the waste waters
from starch factories (an analysis is given) in place of
pure water in the production of yeasts from molasses is
presented. Both brewers' yeast and bakers' high-protein
yeast as well as second generation parent yeasts were pro-
duced; the composition of the mash and a characteriza-
tion of the products are given. Laboratory and pilot plant
tests have shown that the substitution of waste waters from
starch factories for pure water in the production of yeasts

Card : 1/2

POLAND / Chemical Technology. Chemical Products and Their Appli- I-29
cation. Fermentation Industry.

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, No 10217

Abstract : results in an increase of 1-1.5 kg/m³ of waste water used in the yield of yeast; at the same time the consumption of nitrate and phosphate salts required to feed the yeasts is decreased. The amount of sewage from starch factories which must be disposed of is also decreased. The utilization of waste waters from starch factories can be applied not only to the production of yeasts from molasses of potatoe pulp but also to the production of yeasts from sulfite liquors. The author recommends the consideration of the possibility of combined operation in the location of new yeast and potatoe starch plants.

Card : 2/2

KARCZEWSKA, H.

Soviet achievements in obtaining yeast from pulp industry waste. p. 292
FRAZEGIALD PAPIERNICZY. Lodz. Vol. 11, No. 10, Oct. 1955

SOURCE: East European Accessions List (EEAL), IC, Vol. 5, No. 2, Feb. 1956

KARCZEWSKA, H.

Researches of the Pulp and Paper Institute on the production of yeast from residue of alcohol production obtained from sulfite lye or straight from sulfite lye. Biuletyn . p. 1.
(PRZEGLAD PAPIERNICZY. Vol. 12, No. 2, Feb. 1956, Lodz, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

KARCZEWSKA, H.

POLAND/Chemical Technology - Chemical Products and Their
Applications - Wood Processing Industry.
Hydrolytic Industry.

H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958,

Author : Karczewska, H.

Inst : ~~S~~

Title : Yeast Growing in Sulfide-Alcohol Slops and in Sulfide
Dyes.

Orig Pub : Przegl. Papiern., 1956, 12, No 2, Biul.I.C.P. 1-2.

Abstract : A continuous process for yeast production was installed
on a semi-commercial basis in a cellulose-paper
"Marchlewski" Plant in Wloclawek. Each 6-8 hours up to
60% decrease in reducing substance content in the slops
was observed, while the quantity of yeast increased by
50% based on sugar content (I). The amount of unspent
sugar is 10% of the total quantity of (I). The compo-
sition of fodder yeasts, obtained from the slops was

Card 1/2

POLAND/Chemical Technology - Chemical Products and Their
Applications - Wood Processing Industry.
Hydrolytic Industry.

H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37628

indicated. Work was conducted on foam reduction, by
using foam extinguishers, and by a replacement of
 $(\text{NH}_4)_2\text{SO}_4$ and aqueous ammonia by other N-containing
substances.

Card 2/2

18

18

KARCZEWSKA, H.

Determination of the optimum conditions for the alcoholic fermentation of semisulfite spruce lyes of Polish cellulose mills. Report 2. p. 79

SYLWAN (Wydział Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie Towarzystwo Lesne) Warszawa, Poland. Vol. 103, no. 3, Mar 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959.
Uncl.

KARCZEWSKA, H.

Purification of post-sulfite alkali and residues by means of yeast-
ing. Acta Microb.polon. 8:115-123 1959.

1. Z Pracowni Wod Sciekowych Instytutu Badawczego Lesnictwa.
(SEWAGE)
(FUNGI)

KARCZEWSKA, Jolanta; KUJAWATOWSKA, Alicja

The sensitivity of *Entamoeba moskowskii* to some of
new N-halogenamides of benzene, isonic acid and analogous com-
pounds. Wlad. parazyt. 10 no.4:460-463 '62

1. Katedra Biologii i Parazytologii Lekarskiej, Akademia Medyczna,
Lodz.

KARCZEWSKI, B.

Polarization of diffracted electromagnetic waves. Bul Ac Pol nat 8
no.8:541-564 '60.

1. Institute of Physics, Polish Academy of Sciences. Presented by
W. Rubinowicz.

(Electric waves)

16,3200

S/044/62/030/004/067/099
C111/C222

AUTHOR: Karczewski, B.

TITLE: Approximate formulas for the diffracted electromagnetic wave I

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 62,
abstract 4B283. (Bull. Acad. polon. sci. Sér. sci, math.,
astron. et phys., 1960, 8, no. 10, 703 - 708)

TEXT: The method of the stationary phase is applied to the
Kottler-Ch'u formulas, which determine the diffraction of a spherical
electromagnetic wave, and approximate expressions for vectors \vec{E} and
 \vec{H} are obtained.

[Abstracter's note : Complete translation.]

Card 1/1

KARCZEWSKI, B.

Approximate formulas for the diffracted electromagnetic wave. II.
Bul Ac Pol mat 8 no.11/12:767-772 '60.

1. Institute of Physics, Polish Academy of Sciences. Presented by
W. Rubinowicz.

(Electric waves)

25141

P/045/61/020/005/004/008
B133/B2319,3700.AUTHOR: Karczewski, Bohdan

TITLE: Approximate electromagnetic theories of diffraction (Part I)

PERIODICAL: Acta Physica Polonica, v. 20, no. 5-6, 1961, 403-409

TEXT: The subject of discussion covers the results of the theories established by Kottler, Severin and Vasseur for rather simple cases of Fraunhofer diffraction. It is proposed to decide for one of the afore mentioned theories by making adequate experiments. [Abstracter's note: no concrete mode of experimental procedure is mentioned.] The computation bases on the assumption that electromagnetic waves emerging from the half-space $z < 0$ fall on a screen S positioned in the plane $z = 0$ which exhibits an aperture Σ with the boundary Γ . Kottler assumes that the electromagnetic field is discontinuous in the amount of \vec{E}_0 , \vec{H}_0 in the plane of the screen. (Kottler, F., Ann. Physik Leipzig, 71, 457 (1923)). \vec{E}_0 and \vec{H}_0 respectively are equal to the electric and magnetic

Card 1/5

25141

P/045/61/020/005/004/008
B133/B231

Approximate electromagnetic theories

field strengths of the incident wave. For the field in the positive half-space it follows

$$\vec{E}_K = \frac{1}{4\pi} \int_{\Sigma} \left(\vec{E}_0 \frac{\partial G}{\partial n} - G \frac{\partial \vec{E}_0}{\partial n} \right) d\Sigma + \frac{1}{4\pi} \int_F (\vec{s} \times \vec{E}_0) G ds + \quad (1a)$$

$$+ \frac{1}{4\pi i k} \int_F (\vec{s} \vec{H}_0) \text{grad } G ds$$

$$\vec{H}_K = \frac{1}{4\pi} \int_{\Sigma} \left(\vec{H}_0 \frac{\partial G}{\partial n} - G \frac{\partial \vec{H}_0}{\partial n} \right) d\Sigma + \quad (1b)$$

$$+ \frac{1}{4\pi} \int_F (\vec{s} \times \vec{H}_0) G ds -$$

$$- \frac{1}{4\pi i k} \int_F (\vec{s} \vec{E}_0) \text{grad } G ds$$

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P/045/61/020/005/004/008

B133/B231

Approximate electromagnetic theories ...

Here \vec{s} denotes the tangent unit vector to Γ , $G = e^{ikr}/r$. From the physical point of view the above mentioned formulas describe the field generated by such currents and charges as are distributed on S . The Vasseur theory, however, considers the diffraction as a one-sided boundary problem, that has to satisfy the condition $\vec{n} \times \vec{E} = 0$ for $z = +0$. In this case

$$\vec{E}_V = \frac{1}{2\pi} \int_{\Sigma} (\vec{n} \times \vec{E}_0) \times \text{grad } G d\Sigma, \quad (2a)$$

$$\vec{H}_V = \frac{1}{2\pi} \int_{\Sigma} \{ -ik(\vec{n} \times \vec{E}_0) G + (\vec{n} \vec{H}_0) \text{grad } G \} d\Sigma - \frac{1}{2\pi ik} \int_{\Gamma} (\vec{s} \vec{E}_0) \text{grad } G ds. \quad (2b)$$

is valid for $z > 0$. The undisturbed field of the incident wave is applied to the aperture which is of meaning only in case that the apertures are relatively large. The field described by Eq. (2) is due to the magnetic field in Σ . Severin dropped the condition $\vec{n} \times \vec{E} = 0$, assumed, however,

Card 3/5

25141

P/045/61/020/C05/004/008
B133/B231

Approximate electromagnetic theories ...

that the tangential component of the magnetic field in S is identical with that of the undisturbed incident wave. On this assumption he obtains

$$\vec{E}_S = \frac{1}{2\pi} \int_{\Sigma} \{ik[\vec{n} \times \vec{H}_0] G + (\vec{n} \vec{E}_0) \text{grad } G\} d\Sigma + \frac{1}{2\pi ik} \int_{\Sigma} (\vec{n} \vec{H}_0) \text{grad } G d\Sigma \quad (3a)$$

$$\vec{H}_S = \frac{1}{2\pi} \int_{\Sigma} (\vec{n} \times \vec{H}_0) \times \text{grad } G d\Sigma \quad (3b)$$

The formulas, hitherto referred to, are not easy to be handled and it is for this particular reason that the author applies them only to uncomplicated cases of Fraunhofer diffraction. The results disclose that the energy density in the immediate neighborhood of the diffraction centre is not dependent on the screen properties, for each of the three theories mentioned furnished the same value for it which corresponds to that of the Kirchhoff theory. If the distance from the diffraction centre is augmented, the Kottler theory furnishes the same result as that obtained

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by Kirchhoff, whereas the results obtained by Severin and Vasseur differ accordingly. The author thanks Professor A. Rubinowicz for his interest. There are 3 figures and 4 references; 1 Soviet-bloc.

ASSOCIATION: Institute of Physics, Polish Academy of Sciences, Warsaw

SUBMITTED: October 25, 1960

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B133/B2129.3700AUTHOR: Karczewski, Bohdan

TITLE: Kottler's theory of diffraction

PERIODICAL: Acta Physica Polonica, v. 20, nos. 5-6, 1961, 411-423

TEXT: Huygens' principle for electromagnetic waves was formulated in 1923 by Kottler (Kottler, F., Ann. Phys. Leipzig 71, 457 (1923)). Kottler's formulas, which represent a solution of the complete system of Maxwell's equations, can be presented as surface integrals extending over the surface of a diffracting aperture and as curvilinear integrals over its edge. The advantage of the theory consists in taking into account the charges at the edge Γ . Kottler solved the diffraction problem as a discontinuity problem, while actually it is a boundary problem. Since the non-perturbed electromagnetic wave appears in the integral's the properties of the diaphragm are neglected as in Kirchhoff's theory. In spite of this neglect, the Kirchhoff theory will describe correctly the conditions in the neighborhood of the shadow boundary. In the following chapters, it is shown that Kottler's theory will agree with that of Kirchhoff in this region.

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and, therefore, the Kottler's formulas are useful. For this purpose, the radiation of an electric dipole is investigated, which, at a point L, oscillates parallel to the z-axis. The calculations are not done with Kottler's formulas but with an approximation obtained by the stationary phase method of Rubinowicz (Rubinowicz, A., Ann. Phys. Leipzig 73, 339, (1924)). In this approximation, \vec{E} at a point P is given by

$$\begin{aligned} \vec{E} = \vec{E}^* \pm k \left[\text{grad}_L \frac{\partial}{\partial z_L} \left(\frac{e^{-i(kR + \frac{3\pi}{4})}}{R\sqrt{2}} \int_{-\infty}^{\frac{2k}{\pi}(r+q-R)} e^{-i\frac{\pi}{2}v^2} dv \right) \right] + \\ + \frac{1}{4\pi} \frac{e^{-i(kr + \frac{\pi}{4})}}{r} \sqrt{\frac{2\pi}{k\epsilon''}} [\vec{i} \times \vec{E}_0] - \frac{1}{4\pi} \frac{e^{-i(kr + \frac{\pi}{4})}}{r} \sqrt{\frac{2\pi}{k\epsilon''}} (\vec{i} \vec{H}_0) \text{grad}_P r, \\ \vec{H} = \vec{H}^* \pm k \left[\text{grad}_L \left(\frac{e^{-i(kR + \frac{5\pi}{4})}}{R\sqrt{2}} \int_{-\infty}^{\frac{2k\pi-1}{\pi}(r+q-R)} e^{-i\frac{\pi}{2}v^2} dv \right) \right] \times \vec{x} + \\ + \frac{1}{4\pi} \frac{e^{-i(kr + \frac{\pi}{4})}}{r} \sqrt{\frac{2\pi}{k\epsilon''}} [\vec{i} \times \vec{H}_0] + \frac{1}{4\pi} \frac{e^{-i(kr + \frac{\pi}{4})}}{r} \sqrt{\frac{2\pi}{k\epsilon''}} (\vec{i} \vec{E}_0) \text{grad}_P r. \end{aligned} \quad (3.5)$$

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where \vec{k} denotes the unit vector in the direction of the z-axis, \vec{t} the tangential unit vector at Γ , r the distance between P and a point Q on the edge Γ , ρ the distance LQ, and $\mathcal{J} = r + \rho$; \mathcal{J}'' is given by

$$\mathcal{J}'' = \sin^2(\varrho, ds) \left(\frac{1}{r} + \frac{1}{\rho} \right) + \frac{1}{K} [\cos(r, K) + \cos(\varrho, K)] \quad (2.3).$$

The subscript γ means that the value at the point P has to be substituted before differentiation. The behavior of each term in (3.5) is investigated by detailed calculations. It is concluded that in the neighborhood of the shadow boundary only those terms have to be taken into account, which contain the operators grad_L or $\text{grad}_L \cdot \frac{\partial}{\partial z_L}$. In these expressions, only the

quantity e^{-ikR}/R has to be differentiated. The results obtained agree with experimental data and also with Kirchhoff's theory. The author thanks Professor A. Rubinowicz for his help. There are 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

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ASSOCIATION: Institute of Physics, Polish Academy of Sciences, Warsaw

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KARCZEWSKI B

KARCZEWSKI, B.

Experimental results up to date of the practice of accelerarating the curing of concrete by means of combines.

p. 17 (Budownictwo Przemyslowe) Vol. 4, no. 9, Sept. 1955, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

KARCZEWSKI, R.

COUNTRY : POLAND
CATEGORY : General and Specialized Zoology. Insects.
 : Insect pests and acarids.
 : Insects, Acarids, 1954, No. 1, 1954

P

AUTHOR : Karczewski, R.
INST. : ~~Institute of Zoology~~
TITLE : Control of Colorado potato beetle with the aid of
 : airplanes in 1954.

ORIG. PUB. : Insect. and acarology, 1957, 17, No. 4, 431-432

ABSTRACT : In 1954, the cost of aerial dusting was 1.5 times more
expensive than the on-the-ground treatment. The chief
reasons for the high cost are organizational shortcomings.
From the entire flying time, an average of 1/3 is spent
for dusting. The balance of the time is used for flights
from the airplane to the place to be treated and back.
For the elimination of these shortcomings, the following
is proposed: 1) To work with airplanes only on large
or less densely grooved potato fields with the area of
individual fields not less than 7 ha (with the expenditure
of the insecticide at the rate of 30 kg/ha, the supply of

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